# HURRICANE OF OCTOBER 3–12 AND TROPICAL DISTURBANCE OF OCTOBER 18–21, 1941

By HOWARD C. SUMNER

[Weather Bureau, Washington, November 1941]

*Hurricane of October 3–12, 1941.*—The first indications of this storm were observed over the Atlantic about 300 miles north of the Virgin Islands on the evening of October 3. Morning observations of the 4th showed a definite circulation and established the center near latitude 23° N., longitude 67° W. Moving in a west-northwesterly direction, the storm crossed the Bahama Islands and passed a short distance south of Nassau on the evening of October 5, at which time it was determined to be a small but highly developed storm of hurricane force.

Hon. John H. E. McAndrews, American vice consul at Nassau, made the following report of storm conditions on New Providence Island:

> The storm which broke about 7:35 p. m. Sunday evening centered south of Nassau. The velocity of wind registered 102 miles per hour, averaging between 70–75 miles per hour. The barometer reached 29.12 inches (986.1 millibars).
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> The consulate was kept in touch with the weather forecast by cables sent out by the Jacksonville, Fla., Weather Bureau, and I notified all Americans by personal calls and telephone.
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> From present records there were no casualties and the only serious reported loss is one made by Henry Von Berge whose schooner *Goodwill II* was sunk during the storm. Considerable damage was done to property and all gardens were more or less devastated.

The wind velocity of 102 miles per hour, reported by Mr. McAndrews and registered by a Dines gust recorder, was the highest recorded on the islands during the passage of this storm. The lowest barometer 964.4 millibars (28.48 inches) was registered at The Bight, Cat Island. In addition to the islands of New Providence and Cat, damage resulted on Watling, Exuma, northern Andros, and islands of the Bimini group.

Observations from these islands, relayed through the Director of Telecommunication, Nassau, were invaluable in enabling the forecasters at the Jacksonville office to issue frequent and accurate warnings as the storm approached the southeast Florida coast.

Storm conditions in the Miami area are summarized in the following extracts from the report of Ernest Carson, official in charge at the Miami office:

> On October 6, 1941, a small tropical storm moving slightly north of west, passed over extreme southern Florida and into the Gulf of Mexico. Its center moved inland about 13 miles south of Miami at 5:30 a. m.; and at 5:45 a. m., Goulds, Fla., a short distance inland, was in the calm area. * * *
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> The lowest barometer reading in Miami was 994.9 millibars (29.38 inches) at 5 a. m. on the 6th; and 991.5 millibars (29.28 inches) at Fowey Rock Lighthouse, located 12 miles east-southeast of Miami, at 4:30 a. m. The wind reached a velocity of 68 miles per hour (fastest mile on triple register) at 4:47 a. m. Velocities somewhat higher, no doubt, occurred during the next hour; however, due to interference of a taller building to the east of the station, these were not indicated on the register. At Pan American Dinner Key a peak velocity of 123 miles per hour was recorded, with a sustained velocity of 90 miles per hour for 30 seconds.
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> The most notable feature of this storm was the unusually light rainfall in Nassau and Miami during its approach and passage.

Continuing in a west-northwesterly direction the storm crossed the Everglades south of Lake Okeechobee and passed into the Gulf between Everglades City and Fort Myers about 11 a. m. of the 6th. Along the south shore of the lake, gusts of 60 miles per hour were reported. The lowest pressure, at Everglades City, 995.6 millibars (29.40 inches), was accompanied by winds exceeding 65 miles per hour and a tide of 4.1 feet which flooded the town and surrounding low country to a depth of about 1 foot. Fort Myers was on the northern edge of the storm and suffered little damage from strong winds.

Curving toward the north in the Gulf of Mexico the center moved up the west Florida coast, some distance off shore, causing strong winds at some of the outlying island stations. Edgmont Key at the mouth of Tampa Bay estimated the wind at 60 miles per hour. The disturbance moved inland again at Carrabelle where the calm eye of the storm was experienced between 3:30 and 4:30 a. m. of the 7th. Winds of 65 to 75 miles per hour accompanied the storm at this point, with lowest barometer reported as 982.1 millibars (29.00 inches).

Diminishing somewhat in intensity, but still accompanied by winds with gusts up to 75 miles per hour, the center moved northeastward across Georgia with considerable damage reported along its path as far north as Albany. North of that point little damage was caused by the diminishing winds that attended the storm into South Carolina, where it passed into the Atlantic in the vicinity of Charleston about 8 a. m., October 8.

Although this storm increased somewhat in intensity after moving into the Atlantic, no ship along its later path reported winds higher than force 9. It was traced in a looping course eastward over the ocean until it passed south of Bermuda near latitude 30° N., during the night of October 11–12.

Damage in Florida resulting from this storm has been estimated at $675,000, about equally divided between the northern and southern portions of the State.

Five men were drowned near the small fishing village of Panacea, east of Carrabelle, and these added to three deaths reported from the Bahamas, bring the total of lives lost during this storm to eight. So far as is known seven injuries resulted, none of which could be directly attributed to the storm.

Instrumental in establishing these low figures for loss of life and property damage resulting from this hurricane, were the advisories, warnings, and bulletins, 40 in all,

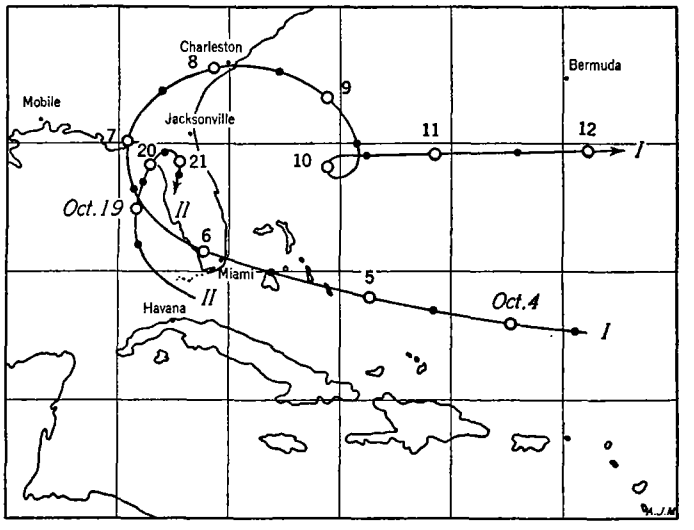


FIGURE 1.—Approximate tracks of tropical storms of October 1941. Open circles on tracks indicate locations of center at 7:30 a. m., E. S. T., of date entered nearby; solid circles indicate locations of center at 7:30 p. m.

issued by the Jacksonville office and promptly distributed by the local offices in cooperation with all communication services.

*Disturbance of October 18–21.*—The first indications of a definite circulation in connection with this slight tropical disturbance were noted about 100 miles off the west Florida coast on the night of October 18–19. It had developed from a wave of low pressure and squally weather that had moved across the southern Bahamas and through the Florida Straits a few days previously, and for which small-craft warnings had been issued on the morning of October 17.

On the morning of October 19, a ship, 50 miles west of Tampa, reported a west-southwest wind of 45 miles per hour and a barometer reading of 1,002.4 millibars (29.60 inches). From this location the storm center then moved north-northwestward and passed inland at Cedar Key, about noon of the 20th, where the lowest barometer reading was 1,005.8 millibars (29.70 inches).

Available observations show no winds over moderate gale force (40 to 50 miles per hour) during the progress of this storm. Torrential rains (10 to 15 inches) occurred at several points near the center as the disturbance stalled and dissipated over northern Florida.

A report from Ocala lists the death of a 6-weeks-old infant, hurled 100 feet from its basket, and injury to both parents when their house was demolished by high winds. This report indicates the formation of a small and short-lived tornado rather than any highly destructive winds resulting directly from the tropical disturbance. All other reported damage resulted from flooding due to the excessive rains.

# METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR OCTOBER 1941

[Climate and Crop Weather Division, J. B. KINCER in charge]

## AEROLOGICAL OBSERVATIONS

By HOMER D. DYCK

Departures from normal surface temperature for October followed nearly the same pattern as in the previous month, temperatures being above normal generally over the eastern half of the country with the exception of an area in the extreme Northeast, and below normal over the western half with the exception of the far Northwest and a narrow strip along the Pacific Coast. Plus departures ranged from 6° to 8° F. over much of the South, while minus departures were small.

At 1,500 meters above sea level the 5 a. m. resultant winds for October were from directions to north of normal over the Lake region and the extreme Northeast and over much of the Plateau region and the far Northwest, while they were from south of normal at this level over much of the rest of the country. At 3,000 meters the morning resultant winds for October were from directions south of normal over most of the country with the exception of three stations near the Pacific coast and one near the Lake region, which had resultant winds to north of normal. At 5,000 meters a good comparison of the 5 p. m. resultant winds with the corresponding 5 a. m. normals was not possible over the northern Great Plains and the Lake region. Elsewhere in the country the October afternoon resultants at this level were from directions to south of the corresponding morning normals generally, except over the Pacific Coast States and over a few stations in the East.

At both the 1,500- and 3,000-meter levels resultant velocities were below normal over the northern Plateau region, the central Mississippi Valley and an area in the southeastern States. At 5,000 meters the 5 p. m. resultant velocities were decidedly higher than corresponding morning normals everywhere except in the Northwest.

Corresponding to the similarity of the October surface temperature departure pattern to that of September, there is also a marked similarity in the departures from normal resultant wind directions for the two months. The same general characteristics are evident in both months, i. e., the turning to southward of normal generally over the eastern half of the country, and the opposite shift from normal over the western half. During October, however, the area in the west where turning to northward of normal took place, was not nearly as extensive as in September thus accounting perhaps for the smaller minus temperature anomalies over that area during October.

When the 5 p. m. resultant directions are compared to the corresponding 5 a. m. resultant directions, no well marked areas of similar wind shift are evident. It may be noted, however, that a shift to southward during the day occurred at considerably more stations than a shift to northward.

At 1,500 meters the 5 p. m. resultant velocities were smaller than the corresponding 5 a. m. velocities over the extreme northern States and over the Middle Atlantic States and the South, while the afternoon velocities were larger than the morning velocities elsewhere generally. At 3,000 meters the p. m. resultant velocities were higher than corresponding a. m. velocities everywhere except over a small area in the southern Plateau region and California where they were slightly below the morning velocities.

The upper-air data discussed above are based on 5 a. m. (E. S. T.) pilot balloon observations (charts VIII and IX) as well as on observations made at 5 p. m. (table 2 and charts X and XI).

Radiosonde and airplane stations located in the southern part of the country recorded on the average the highest mean monthly pressures at each of the several standard levels from 2,000 to 18,000 meters. The highest mean monthly pressure occurred over both Atlanta and Charleston at the 2,000- and 2,500-meter levels, over Atlanta at 3,000 and 4,000 meters, and over Atlanta, Brownsville, and Miami at 5,000 meters. At 6,000 meters Atlanta, Brownsville, Miami, and San Antonio recorded the highest mean monthly pressure while the highest occurred over Brownsville, Lake Charles, Miami, and San Antonio at 7,000 meters, over Brownsville and Miami at 8,000 meters, over Miami and San Antonio at 9,000 meters, and over Brownsville, Miami, and San Antonio at 10,000 meters. At 11,000 meters the highest mean monthly pressure occurred over Miami and San Antonio, while at 12,000 meters pressures averaged highest over Brownsville, Miami, and San Antonio. San Antonio recorded the highest mean monthly pressure from 13,000 to 18,000 meters inclusive. Atlanta also recorded the same maximum, however at 16,000 meters. The lowest mean monthly pressure occurred over both Portland, Maine, and Sault Ste. Marie from 2,000 to 6,000 meters inclusive, while at 7,000 and 8,000 meters the lowest occurred over Portland, Maine, Sault Ste. Marie, Seattle, and Spokane, and at 9,000 meters it occurred at Spokane and Seattle. Spokane recorded the lowest mean monthly pressure at